



Indian Institute of Science
Centre for BioSystems Science and Engineering
BSSE Seminar



1 March 2021, 4:00 p.m., Virtual

**A noninvasive window to sneak in Healthy Brain and Gliomas:
Application of Magnetic Resonance Imaging and Spectroscopy**

Dr. Vivek Tiwari,
Assistant Professor,
Centre for Brain Research, IISc

About the speaker:

Dr. Vivek Tiwari joined the Centre for Brain Research at IISc in October, 2019 as an Assistant Professor. Prior to this he was a postdoctoral fellow at the Advanced Imaging Research Center at the University of Texas Southwestern Medical Center from 2014-2019. He did his graduate studies in Hyderabad, and obtained a PhD in NMR Spectroscopy and Neurochemistry from the Center for Cellular and Molecular Biology, after having graduated with an M.Sc. in Biochemistry from the University of Hyderabad in 2008.

More information here: <https://www.cbr.iisc.ac.in/people-faculty-vivektiwari.php>

Abstract:

Magnetic Resonance Imaging (MRI) offers an unparalleled noninvasive opportunity to study structural, cerebrovascular, and biochemical details of the brain without disturbing it. I will share my research work that shows application of MRI and spectroscopic imaging to understand the subtle structural, microstructural, and metabolic changes in healthy human brain and gliomas. A part of the lecture will focus on in vivo identification of hard-to-detect biochemicals that may identify with a genetic or epigenetic event. I will also discuss the need of tailoring the existing MRS/I methods to obtain precise clinically relevant information.